

AMENDMENTS TO THE CLAIMS

1. (Original) An organ manipulation apparatus, including:

at least one suction member having an inner surface and an outer surface, wherein the suction member is configured to exert sufficient suction force on an organ to move the organ when the suction member is placed against the organ, a pressure differential is established between the inner surface and the outer surface, and the suction member is moved;

a support structure; and

a compliant joint coupled between the suction member and the support structure, wherein the support structure and the compliant joint are configured to support the suction member, with the organ supported in a retracted position by the suction member, such that the suction member has freedom to move at least along an axis of the suction member relative to the support structure.

Claims 2-47. (Canceled) Please cancel claims 2-47 without prejudice to the possibility of filing one or more continuing applications directed to the subject matter recited therein.

48. (Original) An organ manipulation apparatus, including:

at least one bio-absorbable disc with an adhesive surface configured to be adhered to an organ, wherein the disc is configured to exert sufficient traction force on the organ to move the organ when the adhesive surface is pressed against the organ and said disc is moved;

a support structure; and

a compliant joint coupled between the disc and the support structure, wherein the support structure and the compliant joint are configured to support the disc with the organ suspended from the disc in a retracted position, and with the disc having freedom to move, at least vertically, relative to the support structure.

49. (Canceled)) Please cancel claim 49 without prejudice to the possibility of filing one or more continuing applications directed to the subject matter recited therein.

50. (Original) A method for compliant retraction of an organ, including the steps of:

(a) retracting the organ by exerting suction thereon using a suction member coupled to a mounting element, in such a manner that the suction member has freedom to move at least along an axis

of said suction member relative to the mounting element in response to normal movement of the organ;
and

(b) maintaining the organ in a retracted position by exerting suction thereon using the suction member while said suction member is coupled to the mounting element, in such a manner that said suction member has freedom to move at least along the axis of said suction member relative to the mounting element.

51. (Original) The method of claim 50, wherein the suction member is a single suction cup, the organ is a beating heart, and step (b) includes the step of suspending the heart from the suction cup in the retracted position using suction in such a manner that the suction member has freedom to move at least vertically relative to the mounting element in response to normal beating movement of the heart.

52. (Original) The method of claim 51, wherein the beating heart has an apex, the suction cup is configured to conform to and exert suction on the apex of the beating heart, and step (a) includes the steps of:

affixing the suction cup to the heart at a position of the heart concentric with said apex of the heart;

applying suction to the heart by coupling the suction member to a vacuum source; and
moving the suction member to retract the heart.

53. (Currently Amended) The method of claim 50, wherein the suction member comprises multiple suction members cups, the organ is a beating heart, and step (b) includes the step of suspending the heart from the multiple suction members in the retracted position using suction in such a manner that each of the suction members has freedom to move at least vertically relative to the mounting element in response to normal beating movement of the heart.

54. (Original) A method for compliant retraction of an organ, including the steps of:

(a) retracting the organ by exerting traction thereon using a bio-absorbable disc having an adhesive surface affixed to the organ, wherein the disc is coupled to a mounting element in such a manner that the disc has freedom to move at least along an axis of said disc relative to the mounting element; and

(b) maintaining the organ in a retracted position by exerting traction thereon while the disc is

coupled to the mounting element, in such a manner that the disc has freedom to move, at least along the axis of said disc relative to the mounting element.

55. (Original) The method of claim 54, wherein the organ is a beating heart, and step (b) includes the step of suspending the heart from the disc in the retracted position in such a manner that the disc has freedom to move at least vertically relative to the mounting element in response to normal beating movement of the heart.

56. (Original) A locking arm having a flexible state and a rigid state for use in a organ manipulator apparatus, the arm comprising:

a cable; and

ball joints threaded along the cable, each of the ball joints having a convex surface, a concave socket surface, a length, and a diameter, wherein the socket surface is shaped for receiving the convex surface of an adjacent one of the ball joints, and the diameter is greater than the length.

Claims 57-67. (Canceled)) Please cancel claims 57-67 without prejudice to the possibility of filing one or more continuing applications directed to the subject matter recited therein.